



## The Quality of Health Care Received by Older Adults

In the United States today, more than 40 cents of every health care dollar is spent on people who are 65 or older. Older adults suffer from a multitude of conditions and are especially susceptible to the effects of poor care; yet we know relatively little about the quality of health care older people receive. A team of experts from RAND Health, a unit of the RAND Corporation, has developed a system for measuring the quality of care delivered to the elderly and used the system to assess the quality of care given to a group of community-dwelling older adults who were members of a managed care plan. The key findings from their assessment are as follows:

- Vulnerable elders receive about half of the recommended care, and the quality of care varies widely from one condition and type of care to another.
- Preventive care suffers the most, while indicated diagnostic and treatment procedures are provided most frequently.
- Care for geriatric conditions, such as incontinence and falls, is poorer than care for gen-

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- Preventive care suffers the most, while indicated diagnostic and treatment procedures are provided most frequently.
- Care for geriatric conditions, such as incontinence and falls, is poorer than care for general medical conditions such as hypertension that affect adults of all ages.
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### This Highlight summarizes RAND Health research reported in the following publications:

*Developing Quality of Care Indicators for the Vulnerable Elderly: The ACOVE Project*, Santa Monica, Calif.: RAND Corporation, RB-4545, 2002, [www.rand.org/publications/RB/RB4545](http://www.rand.org/publications/RB/RB4545).

Higashi T, PG Shekelle, DH Solomon, EL Knight, C Roth, JT Chang, CJ Kamberg, CH MacLean, RT Young, J Adams, DB Reuben, J Avorn, and NS Wenger, "The Quality of Pharmacological Care for Vulnerable Older Patients," *Annals of Internal Medicine*, Vol. 140, 2004, pp. 714-720.

Rubenstein LZ, DH Solomon, CP Roth, et al., "Detection and Management of Falls and Instability Among Vulnerable Elders by Community Physicians," *Journal of the American Geriatric Society*, in press.

Wenger NS, DH Solomon, CP Roth, et al., "The Quality of Medical Care Provided to Vulnerable Community-Dwelling Older Patients," *Annals of Internal Medicine*, Vol. 139, 2003, pp. 730-747.

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## Measuring the Quality of Care

Researchers at RAND Health have collaborated to develop and apply the first quality-of-care system for vulnerable older adults—those most likely to die or to become frail, experiencing a profound decrease in their ability to function, in the next two years. To date, the Assessing Care of Vulnerable Elders (ACOVE) study is the most comprehensive examination of the quality of medical care provided to vulnerable older Americans.

Working with a panel of nationally recognized experts in geriatric care, the RAND researchers identified 22 conditions—including diseases, syndromes, physiological impairments, and clinical situations—that account for the majority of health care received by older adults. Some of these conditions, such as depression and chronic pain, are likely to affect all adults, but some, such as falls and mobility problems, are of greater concern for the older population.

Based on reviews of the medical literature and expert opinion, the RAND team proposed a set of quality-of-care indicators for each topic—recommendations that set a minimum standard for acceptable care. The indicators were evaluated by expert panels as well as the American College of Physicians Task Force on Aging. In all, 236 quality indicators were accepted, covering four types of health care: prevention, diagnosis, treatment, and follow-up.

### What Does a Quality-of-Care Indicator Look Like?

An example of a quality indicator for assessing the reasons for falling:

**If** a patient reports two or more falls in the past year, or one fall with injury requiring medical care,

**Then** a fall evaluation should be performed including history and physical exam—

**Because** some reasons for falling can be treated, which can reduce the risk for future falls.

The RAND team used the indicators to assess the quality of care given to a group of community-dwelling older adults who were members of one of two managed care plans. The team identified potential participants—vulnerable elderly—by asking older adult plan members (or their caregivers) to complete a brief survey (called the Vulnerable Elders Survey) about their health and functional limitations (see *Who Are the Vulnerable Elderly?*). The medical charts of those identified as vulnerable elderly were reviewed to assess whether the participant was eligible for and received indicated care for each of the 22 conditions; if a participant saw more than one

provider, the research team reviewed charts from each provider. Participants (or a caregiver, if the participant was unable to respond) were also interviewed to identify any aspects of care that might not have been captured in their medical charts.

### Who Are the Vulnerable Elderly?

The researchers developed and tested a simple questionnaire, the Vulnerable Elders Survey, to identify vulnerable elders. Points were assigned for characteristics such as older age and limitations in daily functioning. A score of three or more points defines a vulnerable elder.

Characteristic	Score
Self-rated health: fair or poor	+1
Limitations in physical functioning (difficulties carrying 10 pounds, grasping, reaching, stooping, and/or walking one-quarter mile)	+1 or +2
Any functional disability (difficulties bathing, shopping, walking, with money management, and/or with light housekeeping)	+4
Age 75–84	+1
85 and over	+3

### The Quality of Care Delivered to the Elderly Varies Widely

The vulnerable elderly received only about half of the care recommended, as measured by the percentage of time providers adhered to care indicators. What is more, the quality of care varied greatly from one condition to another, as shown in Figure 1.

### Doctors Adhered to Treatment Recommendations More Often than to Recommendations for Prevention

Adherence to the indicators also varied for the different types of care, as shown in Figure 2. Comparing adherence for the different types of care for all 22 conditions shows that indicators for preventive care had the lowest adherence—43 percent—and adherence for diagnostic indicators was only slightly higher—46 percent. Yet adherence to treatment indicators was 81 percent. This difference might be explained by the nature of the U.S. health care system, which reimburses providers for time spent administering treatments—performing procedures and prescribing medications—but not for time spent taking thorough histories or providing preventive counseling.

What's more, providers administered proper care to patients with conditions that demanded immediate treatment (acute conditions) far more frequently than to those with chronic health problems. Indicators for treatment of acute general medical conditions had an adherence rate of 83 percent, compared with only 51 percent for chronic conditions. Treatment of acute and chronic geriatric conditions showed a similar disparity: 41 percent for acute conditions compared with 29 percent for chronic conditions.

### Care for Geriatric Conditions Is Provided Less Faithfully than for General Medical Conditions

The researchers also noticed that adherence to quality indicators for geriatric conditions—such as dementia, urinary incontinence, and falls, which affect primarily the elderly—was much lower than adherence for such general medical conditions as diabetes and hypertension (see Figure 3). This finding is particularly troublesome given that early attention to geriatric conditions such as falls and gait disorders may avoid functional decline and even death.

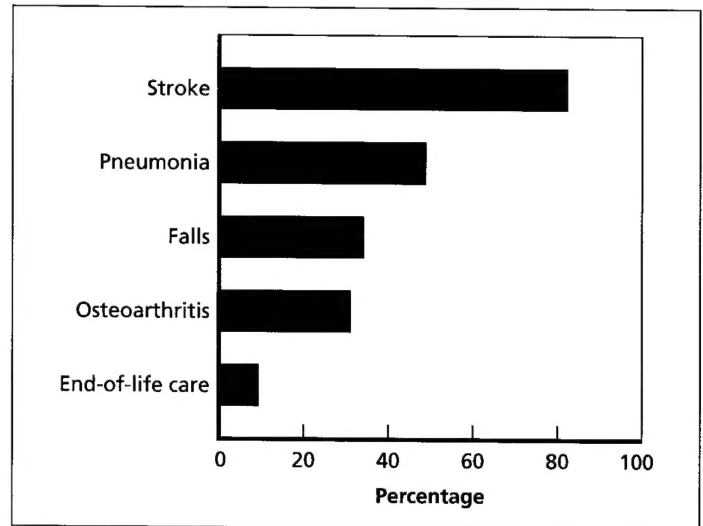
Geriatric conditions may receive short shrift in primary care settings for several reasons. First, medical schools and primary care residency programs may not emphasize the skills needed to diagnose and treat diseases limited largely to the geriatric population; whereas medical students and residents get endless opportunities to practice the skills needed for more general medical conditions, such as adjusting the dose of medication for diabetes. Thus, practitioners may lack the skills even to recognize most geriatric conditions. Second, feedback to practitioners from payers (such as insurance companies) about their practice patterns, which influences those patterns, has rarely been provided for the diagnosis and treatment of geriatric conditions.

The findings from ACOVE suggest that medical schools and residency programs need to increase their emphasis on diagnosis and treatment of geriatric conditions, particularly as the baby-boomer population ages. In addition, patients and their family members need to be better informed about geriatric health care and need to make sure that elders receive care that is appropriate for age-related ailments.

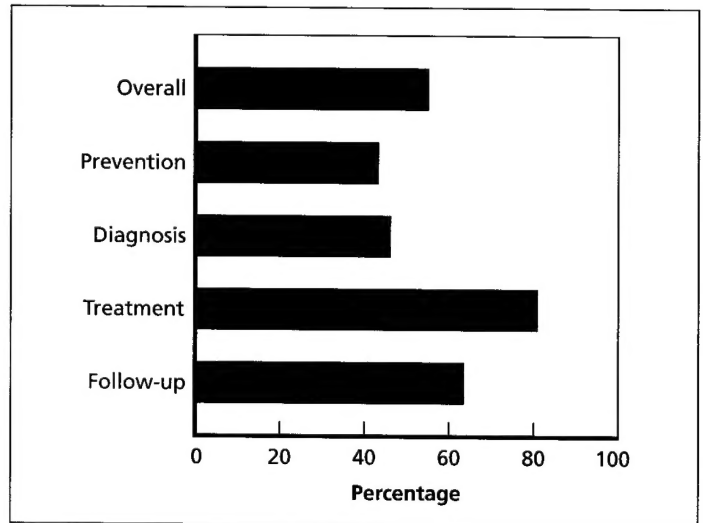
### Do Older Adults Receive the Medications They Need?

One in four ACOVE indicators pertained to medication management—the prescription of drugs—for the various ACOVE conditions. The indicators can be divided into four categories of behavior: (1) prescribing the medications recommended for the condition; (2) avoiding inappropriate medications (the wrong medication for the condition or a medication that might interfere with the patient's condition or another medication the patient is taking); (3) educating

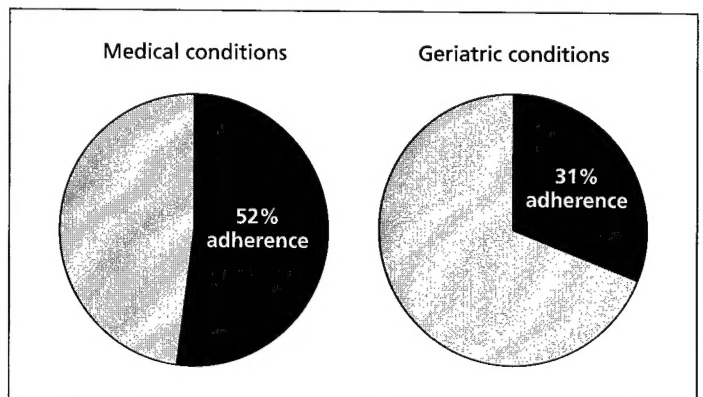
**Figure 1**  
Adherence to Quality Indicators Varies by Condition



**Figure 2**  
Adherence to Quality Indicators Depends on the Type of Care



**Figure 3**  
Adherence to Quality Indicators for Geriatric Conditions Was Poorer than That for General Medical Conditions



the patient about the drug, following up on its use, and documenting the prescription and any adverse reactions in the patient's chart; and (4) adequate monitoring: performing periodic lab tests or checking to ensure that the drug is reaching adequate levels in the body and that it is not causing undesirable effects on other body systems.

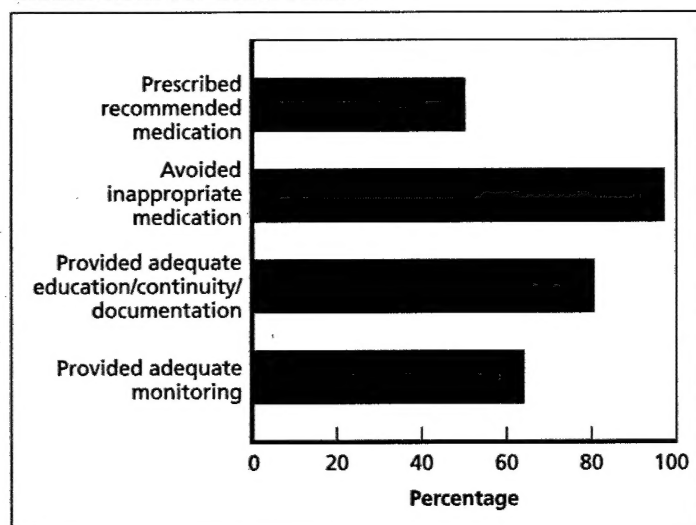
The overall level of adherence for medication management is high: 81 percent. Nevertheless, as Figure 4 shows, physicians often fail to prescribe recommended medications for older adults. In addition, too little attention is focused on monitoring older patients after prescribing a new medication: For example, such monitoring would include regularly measuring electrolyte levels and kidney function after prescribing diuretics or the class of drugs known as ACE inhibitors.

Older adults may be less likely than younger adults to receive necessary drugs for several reasons: Some providers

may be unaware of how to apply the findings from clinical trials on younger adults to the unique situation of older adults. Other reasons may include providers' fear of contributing to the overmedication of older persons and insufficient pharmacy coverage (though the ACOVE patients had access to drugs, both name brand and generic, at a copayment of \$10 or less).

Thus, pharmacological management concerns among older adults run far deeper than simple lack of insurance coverage. Even older adults with drug coverage—and all older adults who are covered under Medicare will soon have at least *some* coverage—risk not receiving needed medications or adequate medication monitoring. An innovation that is likely to simplify appropriate prescription and monitoring is the electronic (computerized) physician order entry system, which can accommodate explicit quality indicators such as the ACOVE indicators.

**Figure 4**  
**Physicians Often Fail to Prescribe Recommended Medications for Older Adults**



### On the Horizon

The quality of health care provided to the elderly is far less than it could be. What is being done?

In a follow-up project to the development of the quality assessment indicators, the ACOVE researchers are testing a set of practical interventions aimed at improving performance of some of the most underperformed of the indicated procedures. The interventions, which are being tested in community medical groups, are intended to improve the care provided by primary care physicians for three conditions of older adults: incontinence, falls, and dementia. What's more, the interventions are tailored to the needs of the specific medical practice where the intervention is carried out. If successful, the intervention may lead to the development of physician and patient educational materials and decision aid tools that will change the way medicine is practiced for a growing segment of the U.S. population. ■

Abstracts of all RAND Health publications and full text of many research documents can be found on the RAND Health web site at [www.rand.org/health](http://www.rand.org/health). The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

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